

### **Format AS3: RRAS Provider Parameters by ERPC**

FROM: **ERPC**

TO: **NODAL AGENCY (NLDC, DELHI)**

Name of the RRAS Provider Generating Station: **FSTPP**

Name of the Owner Organization : **NTPC Ltd**

Validity of the information: From **16/10/2021 TO 15/11/2021**

Date: **13.10.2021**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	ST-I& II: 3*200+2*500 MW ST- III: 1*500 MW
b)	Total Installed Capacity (MW)	ST -I& II: 1600 ST- III: 500
c)	Maximum Possible Ex-Bus Injection (MW) (including overload, if any)	ST - I & II: 1557.0 ST- III: 494.0
d)	Technical Minimum (MW)	ST -I& II: 820.3 ST-III: 257.8
e)	Type of Fuel	Bituminous/ Sub-Bituminous coal
f)	Region	Eastern Region-1
g)	Bid Area	E1
h)	Fixed Cost (paise/KWh up to one decimal place)	<b>ST -I &amp; II: 82.4</b> <b>ST- III: 149.2</b>
i)	Variable Cost (paise/KWh up to one decimal place)	<b>ST -I &amp; II: 298.1</b> <b>ST- III: 292.7</b>
j)	Ramp-Up Rate (MW/Min) for each unit	For 200 MW Stage I:1.83MW/Unit/Min For 500 MW Stage II:4.71MW/Unit/Min For 500 MW Stage III: 4.69 MW/Unit/Min For commercial stage I : 14.92 MW/ min
k)	Ramp-Down Rate (MW/Min) for each unit	-do-
l)	Start-Up time from Cold Start (in Min) and Warm Start (in Min) for each unit	ST-I, II & III: Cold: 360 Minutes ST-I, II & III: Warm: 240 Minutes
m)	Any other information	840 min for RSD in case of unit shutdown period is more than 5 days as boiler will be kept under preservation.



**SHYAM KEJRIWAL**  
**SE(COMMERCIAL), ERPC**

No.: ERPC/Comml-II/AS-3

**Format AS3: RRAS Provider Parameters by ERPC**

FROM: **ERPC**

To: **NODAL AGENCY (NLDC, DELHI)**

Name of the RRAS Provider Generating Station: **KAHALGAON STPP**

Name of the Owner Organization : **NTPC Ltd**

Validity of the information: From **16/10/2021 TO 15/11/2021**

Date: **13.10.2021**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	4*210MW+3*500MW
b)	Total Installed Capacity (MW)	2340
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	2237 (803+1434)
d)	Technical Minimum (MW)	1194(421+773)
e)	Type of Fuel	Bituminous/ Sub-Bituminous coal
f)	Region	Eastern Region-1
g)	Bid Area	
h)	Fixed Cost (paise/KWh up to one decimal place)	<b>ST-I: 104.8</b> <b>ST-II: 108.9</b>
i)	Variable Cost (paise/KWh up to one decimal place)	<b>ST-I: 240.1</b> <b>ST-II: 227.7</b>
j)	Ramp-Up Rate (MW/Min) for each unit	ST-I/II: 1.91/4.69
k)	Ramp-Down Rate (MW/Min) for each unit	ST-I/II: 1.91/4.69
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	ST-I: 360/240 ST-II: 360/240
m)	Any other information Start Up Time for Cold Start Up (in min) for each unit (For RSD in case of unit shutdown period is more than 5 days as boiler will be kept under preservation.)	Stage I- 840 min Stage II-840 min



**SHYAM KEJRIWAL**  
**SE(COMMERCIAL), ERPC**

**No.: ERPC/Comml-II/AS-3**

**Format AS3: RRAS Provider Parameters by ERPC**

FROM: **ERPC**

TO: **NODAL AGENCY (NLDC, DELHI)**

Name of the RRAS Provider Generating Station: **NTPC Barh**

Name of the Owner Organization : **NTPC Ltd**

Validity of the information: From **16/10/2021 TO 15/11/2021**

Date: **13.10.2021**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	ST- II: 2*660 MW
b)	Total Installed Capacity (MW)	1320
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	ST- II: 1237.5
d)	Technical Minimum (MW)	ST- II: 680.63
e)	Type of Fuel	Bituminous/ Sub-Bituminous coal
f)	Region	ER-I
g)	Bid Area	ER-I & II, NER
h)	Fixed Cost (paise/KWh up to one decimal place)	<b>ST- II: 184.0</b>
i)	Variable Cost (paise/KWh up to one decimal place)	<b>ST- II: 302.2</b>
j)	Ramp-Up Rate (MW/Min) for each unit	6.19
k)	Ramp-Down Rate (MW/Min) for each unit	6.19
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	Cold: 2100 Warm: 900
m)	Any other information	Nil.

**SHYAM KEJRIWAL  
SE(COMMERCIAL), ERPC**

**No.: ERPC/Comml-II/AS-3**

**Format AS3: RRAS Provider Parameters by ERPC**

FROM: **ERPC**

TO: **NODAL AGENCY (NLDC, DELHI)**

Name of the RRAS Provider Generating Station: **TSTPP-I**

Name of the Owner Organization : **NTPC Ltd**

Validity of the information: From **16/10/2021 TO 15/11/2021**

Date: **13.10.2021**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	2*500 MW
b)	Total Installed Capacity (MW)	1000
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	945
d)	Technical Minimum (MW)	511.23
e)	Type of Fuel	Bituminous/Sub-Bituminous coal (Start up with HFO/LDO)
f)	Region	ER
g)	Bid Area	
h)	Fixed Cost (paise/KWh up to one decimal place)	<b>95.9</b>
i)	Variable Cost (paise/KWh up to one decimal place)	<b>168.1</b>
j)	Ramp-Up Rate (MW/Min) for each unit	4.65
k)	Ramp-Down Rate (MW/Min) for each unit	4.65
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	Cold: 360 Warm: 240 840 min if recalled after more than 5 days.
m)	Any other information	Nil

**SHYAM KEJRIWAL  
SE(COMMERCIAL), ERPC**

**No.: ERPC/Comml-II/AS-3**

**Format AS3: RRAS Provider Parameters by ERPC**

FROM: ERPC

TO: NODAL AGENCY (NLDC, DELHI)

Name of the RRAS Provider Generating Station: Nabinagar TPP

Name of the Owner Organization : BRBCL

Validity of the information: From 16/10/2021 TO 15/11/2021

Date: 13.10.2021

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	4*250 MW
b)	Total Installed Capacity (MW)	750
c)	Maximum Possible Ex-Bus Injection (MW) (including overload, if any)	682.5
d)	Technical Minimum (MW) of each unit	137.5
e)	Type of Fuel	Coal + LDO
f)	Region	ER
g)	Bid Area	E1
h)	Fixed Cost (paise/KWh up to one decimal place)	<b>250.0</b>
i)	Variable Cost (paise/KWh up to one decimal place)	<b>236.4</b>
j)	Ramp-Up Rate (MW/Min) for each unit	2.28
k)	Ramp-Down Rate (MW/Min) for each unit	2.28
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	Cold: 480* Warm: 300
m)	Any other information *Start Up Time from RSD (in case of unit shutdown period is more than 5 days as boiler will be kept under preservation.)	840 min



**SHYAM KEJRIWAL  
SE(COMMERCIAL), ERPC**

No.: ERPC/Comml-II/AS-3

**Format AS3: RRAS Provider Parameters by ERPC**

FROM: **ERPC**

TO: **NODAL AGENCY (NLDC, DELHI)**

Name of the RRAS Provider Generating Station: **TEESTA-V HPS**

Name of the Owner Organization : **NHPC Ltd**

Validity of the information: From **16/10/2021 TO 15/11/2021**

Date: **13.10.2021**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	3*170 MW
b)	Total Installed Capacity (MW)	510
c)	Maximum Possible Ex-Bus Injection (MW) (including overload, if any)	504
d)	Technical Minimum (MW) of each unit	150
e)	Type of Fuel	Water
f)	Region	Eastern Region
g)	Bid Area	E1
h)	Fixed Cost (paise/KWh up to one decimal place)	<b>116.3</b>
i)	Variable Cost (paise/KWh up to one decimal place)	<b>116.3</b>
j)	Ramp-Up Rate (MW/Min) for each unit	50
k)	Ramp-Down Rate (MW/Min) for each unit	50
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	Not Applicable
m)	Any other information	Nil

**SHYAM KEJRIWAL  
SE(COMMERCIAL), ERPC**

**No.: ERPC/Comml-II/AS-3**

**Format AS3: RRAS Provider Parameters by ERPC**

FROM: **ERPC**

TO: **NODAL AGENCY (NLDC, DELHI)**

Name of the RRAS Provider Generating Station: **RANGIT HPS**

Name of the Owner Organization : **NHPC Ltd**

Validity of the information: From **16/10/2021 TO 15/11/2021**

Date: **13.10.2021**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	3*20 MW
b)	Total Installed Capacity (MW)	60
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	63*
d)	Technical Minimum (MW) of each unit	17
e)	Type of Fuel	Water
f)	Region	Eastern Region
g)	Bid Area	E1
h)	<b>Fixed Cost (paise/KWh up to one decimal place)</b>	<b>190.0</b>
i)	<b>Variable Cost (paise/KWh up to one decimal place)</b>	<b>190.0</b>
j)	Ramp-Up Rate (MW/Min) for each unit	20
k)	Ramp-Down Rate (MW/Min) for each unit	20
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	15
m)	Any other information	Nil

\*As per availability of water in the Rangit Reservoir.

**SHYAM KEJRIWAL  
SE(COMMERCIAL), ERPC**

**No.: ERPC/Comml-II/AS-3**

### **Format AS3: RRAS Provider Parameters by ERPC**

FROM: ERPC

TO: NODAL AGENCY (NLDC, DELHI)

Name of the RRAS Provider Generating Station: MTPS Stage -II

Name of the Owner Organization : KBUNL

Validity of the information: From 16/10/2021 TO 15/11/2021

Date: 13.10.2021

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	2*195 MW
b)	Total Installed Capacity (MW)	390
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	372.645
d)	Technical Minimum (MW)	195.195
e)	Type of Fuel	Coal
f)	Region	ER-1
g)	Bid Area	-
h)	Fixed Cost (paise/KWh up to one decimal place)	<b>273.4</b>
i)	Variable Cost (paise/KWh up to one decimal place)	<b>266.3</b>
j)	Ramp-Up Rate (MW/Min) for each unit	1.77 MW/Min
k)	Ramp-Down Rate (MW/Min) for each unit	1.77 MW/Min
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	Cold: 360 Min Cold: 840 Min (If called after more than 5 days as Boiler will kept under preservation) Warm: 240 Min
m)	Any other information	Nil



**SHYAM KEJRIWAL**  
**SE(COMMERCIAL), ERPC**

No.: ERPC/Comml-II/AS-3



### **Format AS3: RRAS Provider Parameters by ERPC**

FROM: **ERPC**

TO: **NODAL AGENCY (NLDC, DELHI)**

Name of the RRAS Provider Generating Station: **Maithon Power Limited**

Name of the Owner Organization : **TPCL**

Validity of the information: From **16/10/2021 TO 15/11/2021**

Date: **13.10.2021**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	2*525 MW
b)	Total Installed Capacity (MW)	1050
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	984.38
d)	Technical Minimum (MW)	541.41
e)	Type of Fuel	Bituminous/ Sub-Bituminous coal (Start up with LDO and HFO)
f)	Region	Eastern
g)	Bid Area	E1
h)	Fixed Cost (paise/KWh up to one decimal place)	<b>142.3</b>
i)	Variable Cost (paise/KWh up to one decimal place)	<b>276.6</b>
j)	Ramp-Up Rate (MW/Min) for each unit	4.92
k)	Ramp-Down Rate (MW/Min) for each unit	4.92
l)	Start-Up from Cold Start and Warm Start (in Min) for each unit	Cold: 720 Warm: 300
m)	Any other information	Nil

**SHYAM KEJRIWAL**  
**SE(COMMERCIAL), ERPC**

**No.: ERPC/CommI-II/AS-3**

**Format AS3: RRAS Provider Parameters by ERPC**

FROM: **ERPC**

TO: **NODAL AGENCY (NLDC, DELHI)**

Name of the RRAS Provider Generating Station: **Nabinagar STPP**

Name of the Owner Organization : **NPGCL**

Validity of the information: From **16/10/2021 TO 15/11/2021**

Date: **13.10.2021**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	2x660 MW
b)	Total Installed Capacity (MW)	1320(2*660)
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	1237.50
d)	Technical Minimum (MW)	680.63
e)	Type of Fuel	Domestic Coal
f)	Region	ER1
g)	Bid Area	E1
h)	Fixed Cost (paise/KWh up to one decimal place)	<b>237.1</b>
i)	Variable Cost (paise/KWh up to one decimal place)	<b>215.9</b>
j)	Ramp-Up Rate (MW/Min) for each unit	6.19
k)	Ramp-Down Rate (MW/Min) for each unit	6.19
l)	Start-Up from Cold Start, Warm Start and Hot start (in Min) for each unit	Cold: 2100 Warm: 900 Hot: 120
m)	Any other information	Nil

**SHYAM KEJRIWAL  
SE(COMMERCIAL), ERPC**

**No.: ERPC/Comml-II/AS-3**

**Format AS3: RRAS Provider Parameters by ERPC**

FROM: **ERPC**

TO: **NODAL AGENCY (NLDC, DELHI)**

Name of the RRAS Provider Generating Station: **Darlipali STPP**

Name of the Owner Organization : **NTPC Ltd**

Validity of the information: From **16/10/2021 TO 15/11/2021**

Date: **13.10.2021**

S.No.	Title/Parameters	Values/Data
a)	Number of Generating Units	2x800 MW
b)	Total Installed Capacity (MW)	1600 MW
c)	Maximum Possible Ex-Bus Injection (MW) (including overload , if any)	1575
d)	Technical Minimum (MW)	825
e)	Type of Fuel	Primary: Bituminous/Sub-Bituminous coal, Secondary: LDO
f)	Region	Eastern Region
g)	Bid Area	E1
h)	Fixed Cost (paise/KWh up to one decimal place)	<b>166.2</b>
i)	Variable Cost (paise/KWh up to one decimal place)	<b>98.2</b>
j)	Ramp-Up Rate (MW/Min) for each unit	7.5
k)	Ramp-Down Rate (MW/Min) for each unit	7.5
l)	Start-Up from Cold Start, Warm Start and Hot start (in Min) for each unit	Cold: 2220 Warm: 1500
m)	Any other information	Nil



**SHYAM KEJRIWAL  
SE(COMMERCIAL), ERPC**

**No.: ERPC/Comml-II/AS-3**